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ABSTRACT

This paper explores the use of technology in teaching business topics at the university level. The use of technologies in the classroom has been developed in a greater degree for non-business disciplines. Specific software programs are listed as well as business games. Finally, a listing of external funding sources is presented to assist in financing technological innovations which cannot be funded from the usual university sources. Included in the appendices are computer and high technology grants and foundations which emphasize education. (Contains 4 references.) (Author/JLB)

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ED 396 662

Technology in the Classroom: Current Developments and How They can be Funded

1993

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TO THE EDUCATIONAL RESOURCES
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Abstract

This article explores the, relatively, sparse use of technology in teaching business topics at the university level. The differences in availability of business software as compared to scientific software are observed. Sources of business-related software are listed. An analysis of the leading business games is presented which enables a potential user to choose the game best suited for the topics to be covered. Finally, a listing of external funding sources is presented to assist in financing technological innovations which cannot be funded from the usual university sources.

Technology in the Classroom:

Current Developments and how They Can Be Funded

History of Technology in the Classroom

"The history of technology in education has not been a stellar one," was an observation made by Bruce Goldberg, Associate Director of the Educational Issues Department of the National Education Association (Business Week, Information Processing, p. 158). Such a comment seems to be at variance with what had been expected of the role of technology in education if technology is viewed in its usual way.

The usual view of technology is that of innovation in the context of high technology. In today's world, it normally has at least some reference to computers and/or other forms of applied science. However, technology, in a pure sense, does not have to refer to "new" technology but can refer to technology of any vintage.

For instance, chalk, blackboards, books, pencils, writing pens, overhead projectors, etc. are applications of technology and were new technology at the time of their introduction. They had a tremendous impact on the

teaching/learning process and are still in widespread use. In fact they continue to serve as the main foundation of much of what is done in education. Their impact on the learning process has been so profound that one could spend a great deal of time on its examination, but the readers of this paper are already familiar with it. Consequently, the rest of this paper will be devoted to the current uses and future applications of technology in hopes of improving its contribution to the teaching/learning process.

Current State of the use of Technology

in the Classroom

If the impact of technology has been less than stellar in the past (and some would argue currently), some of the reasons may have been (Ehrhardt, 1988, p. 15):

1. The limited types of technological developments.
2. The limited nature of many academic disciplines.
3. The limited training of university faculty.

When one thinks of technological developments, one immediately thinks of various

imaging devices (that do not manipulate symbols) such as projectors (movie and still), television sets, and video cassette recorders/players. Beyond this point one would think of computers and their various applications. Many people would have trouble naming additional devices without considerable thought. Consequently, one might speculate that the developments, or at least the limited knowledge of the developments, has played a role in their impact.

The second basic reason shown above may have been influenced by the popularity of the functional delineation of academic disciplines and of the lecture format. As courses become more nearly interdisciplinary in nature, this may change. Collaborative learning experiences may also have an impact. However, up to this point in time, the limited nature of many academic disciplines does seem to have been an influencing factor.

The third reason, the limited training of university faculty, seems to have clearly been a factor. The reward system under which faculty work has not encouraged them to invest time and

effort in innovative teaching activities that require additional training for the faculty member.

The current state of the usage of technology in the classroom seems to have developed to a greater degree for nonbusiness disciplines than for business disciplines. For example, the Spring 1992 Intellimation catalog (a listing of educational software for Macintosh computers) although showing numerous packages for the arts, sciences, and education areas did not even have a business category in its table of contents. Similarly, the following services (with a brief description of each) available through the National Aeronautics and Space Administration (NASA) are, primarily scientific in nature (Barnes, 1992).

NASA News: This service gives a day-to-day update on launches and progress in shuttle missions.

NASA Spacelink: This service gives history, current news, and information relative to the future of NASA and space flight. It also provides information on curricula

materials and technology transfer. The information is provided by the Marshall Space Flight Center.

Space FAQs: This service provides fifteen lists of frequently asked questions, information on tidal bulges, information on interpreting satellite weather photographs, databases on constellations, and nearby stars.

SpaceMet: This is a bulletin-board system which is useful to science educators for exchanging information about space exploration.

Astronomical Databases: This service provides information on astronomical objects.

Lunar and Planetary Institute Information: This service provides information about NASA's Lunar and Planetary Institute and its services.

NASA/IPAC Extragalactic Database: This service contains information on over 200,000 astronomical objects including publications.

National Space Science Data Center: This service allows one to connect to other NASA database catalogs and centers.

Space Telescope Science Institute: This service contains information about the Hubble Space Telescope and the Institute.

One can easily see from the descriptions shown above that a science teacher has ready access through technology to state of-the-art information about technology. Similarly, the Intellimation catalog makes information (programs etc.) available in many other educational areas.

Unfortunately, information, programs, applications, etc. have not been as readily available in the area of business. This has probably been an influencing factor in the slowness with which business education has moved to use high technology in the classroom. If one examines the uses of technology in business courses, he/she will certainly find widespread use of the older technologies such as movies and overhead projectors. The use of later technologies has largely been limited to word processing, spread sheet applications, and the use

of computerized statistical packages. There has been limited use of business games and video taping of student presentations.

Certain factors seem to be at work which will encourage a greater emphasis on the use of technology in colleges of business in the future. Some of these factors are:

1. The current criticism of business schools for not putting enough emphasis on teaching.
2. Budgetary constraints which will limit the number of faculty members available to teach classes resulting in larger class sizes.
3. The need to provide educational services at remote locations.
4. The need to involve students in team projects.
5. The need for a greater emphasis on international business topics.

The application of computer technology through the use of business-related software packages and business games (particularly those

with an international emphasis) can make a significant contribution in these areas.

Obviously, one would be in a better position to select the type of application that would offer the greatest benefit in a given set of circumstances if he/she were well informed relative to the types of programs/packages available. Two categories of available software are discussed below.

Software Sources

Presumably one could start using computer-related technology in the classroom earlier if he/she had an easily accessible source of software as distinguished from having to write his/her own. A number of programs which may be helpful are available from the University of Wisconsin--Madison. Those specifically related to business are:

1. FABRIC, which is a set of tutorials designed for use in basic accounting.
2. FEASIBILITY STUDY, which is related to the preparation of a feasibility study.
3. FUTURE-TIME, which is related to time-series forecasting.

4. HEDGESIM, which simulates commodity marketing and hedging.
5. INTERNATIONAL MANUFACTURING COST COMPARISON, which relates to make-or-buy decisions in an international market.
6. LOT, which relates to lot-sizing decisions.
7. MARKET, which relates to a segmented housing market with random investments.
8. POP, which relates to the optimization of profit for multi-use real estate projects.
9. POWER, which relates to organizational and personal power.
10. PURCHASING MODEL, which relates to the simulation of firm that purchases and sells a particular part.
11. SONATA, which relates to financial analysis and strategic financial planning within a firm.
12. VAL, which relates to security valuation and the management of investment portfolios.

13. ZTEST, which relates to the various uses of the statistic "Z."

Detailed information on these packages is available from the Academic Computing Center, University of WisconsinMadison, 1210 West Dayton Street, Madison, Wisconsin 53706.

Another opportunity to use technology in a business setting is the use of business games. Games will help with the integration of the various disciplines, enhance team building, and, if international in focus, help globalize the students' orientation.

Some of the more widely used international games are:

1. Worldwide Simulation Exercise (Barker, Temple, & Sloan, 1988)--WISE.
2. Multinational Management Game (Keys, Edge, & Wells, 1991)--MMG.
3. International Operations Simulation (Thorelli, Graves, & Howells, 1964) and INTOP Classic PC (Thorelli & Graves, 1989)--INTOP.
4. Thunderbird International Management Simulation (Hoskins, 1989)--TIMS.

5. Stratplan (Hinton & Smith, 1985)--SPLAN.

6. The Business Strategy Game (Thompson & Stappenbeck, 1990)--BSG.

How well a particular game meets the needs of today's students is, at least partially, dependent on how well it addresses issues that are critical to the international environment. These issues were examined by Professor Joseph Wolfe of the University of Tulsa and are presented in Table 1 (Wolfe, 1991). The rankings used in the table are:

- 0 Critical issue was not treated in the game.
- 1 Critical issue was treated but in a static or fixed fashion throughout the simulation's run; a minimal treatment of the critical issue.
- 2 Critical issue was treated and could be influenced exogenously by administrative intervention during the simulation's run; a moderate treatment of the issue.
- 3 Critical issue was treated in a dynamic fashion both exogenously through administrative action or using a real-

world indicator, and endogenously through player interactions with the simulations model or other simulated companies; a completely elaborated treatment of the issue.

Insert TABLE 1 about here

Most of these games will run on mainframe or personal computer platforms and are, therefore, not sensitive to hardware requirements. Professor Wolfe's work in analyzing these games should be very useful in helping potential users select the games best suited to their needs. Once one decides to institute a greater use of technology in the classroom, the issues of how to finance the purchase of additional hardware and software in a time of declining university budgets must be considered.

Funding Sources

Most state supported universities have only three basic sources of revenue: state appropriations, tuition, and fund raising. The current economic environment, which is expected to continue throughout the 1990s, does not offer much

hope of increased state funding. Further, there seems to be limits on how high tuition can go. Consequently, fund raising seems to hold more promise for the financing of technological improvements than the other two sources.

Because fund raising seems to be the most viable source of financing, a search was conducted to identify organizations that place a high priority on the support of educational institutions. The results of that search are presented in Appendix A classified by support for educational institutions, buildings and equipment, and technology. Hopefully, this information will make it easier for schools implementing more technology in the classroom to secure the necessary financing.

Conclusion

Although the use of technology in the classroom has progressed at a pace slower than many would desire, there is significant material available to accelerate that pace. The use of this material (or that faculty members may write themselves) will also aid in the delivery of educational services to remote locations, enhance

the development of teamwork skills, address international issues, and aid in the teaching of large sections. Obviously, the funding issue will have to be addressed, but the prospects for external funding are reasonably good. Other problems, such as changing faculty evaluation criteria to appropriately reward those who work on this problem, although still present can, hopefully, be overcome in light of the increasing pressure on colleges of business to increase their emphasis on teaching. Management education will, no doubt, respond to the needs of the 1990s as it has in the past by overcoming whatever obstacles are in its path.

References

Barnes, James L., The Space and Technology

Education Connection for Middle School

Education, The lists and descriptions were taken from a report given on November 9, 1992, by Professor Barnes on work accomplished up to that time on a research project relating to technology in education. 1992, pp. 6-8.

Business Week, Information Processing, November 11, 1991, pp. 158-162.

Ehrhardt, Michael C., "Technology in the Classroom: Are We Using It to Our Best Advantage?", Reproduced in Survey of Business, Fall 1988, pp. 15-18.

Wolfe, Joseph, Information shared with the author by Professor Wolfe which is based on an analysis of the games examined.

Table 1

Critical Issue Comparisons

| Critical Issue | INTOP | TIMS | MMG |
|-----------------------------|-----------|-----------|-----------|
| Comparative Advantage | 1 | 1 | 2 |
| Differential Inflation | 3 | 2 | 1 |
| Economic Growth/Development | 1 | 2 | 3 |
| Trade Protectionism | 2 | 2 | 1 |
| Sociocultural Factors | 2 | 0 | 2 |
| Intracompany Trans. Pricing | 2 | 2 | 2 |
| Technological Transfer | 0 | 0 | 0 |
| Consol. Fin. Statements | 2 | 3 | 3 |
| Imperfect Competition | 3 | 2 | 1 |
| Nationalism and Visibility | 1 | 1 | 0 |
| Direct Foreign Investment | 3 | 3 | 3 |
| Exchange Gains and Losses | 0 | 2 | 0 |
| Hedging | 0 | 3 | 0 |
| Exchange Rates | 0 | 3 | 2 |
| Offshore Sourcing | 1 | 3 | 1 |
| Political Risks | 0 | 2 | 0 |
| Value-Added Taxes | 0 | 0 | 1 |
| Income Taxes | 1 | 2 | 1 |
| Patent/License Agreements | 2 | 0 | 0 |
| Totals | 24 | 33 | 23 |

| Critical Issue | WISE | SPLAN | BSG |
|-----------------------------|-----------|-----------|-----------|
| Comparative Advantage | 2 | 2 | 2 |
| Differential Inflation | 2 | 0 | 0 |
| Economic Growth/Development | 2 | 1 | 2 |
| Trade Protectionism | 1 | 0 | 3 |
| Soci-cultural Factors | 1 | 1 | 0 |
| Intracompany Trans. Pricing | 3 | 1 | 0 |
| Technological Transfer | 0 | 0 | 0 |
| Consol. Fin. Statements | 3 | 3 | 3 |
| Imperfect Competition | 3 | 2 | 1 |
| Nationalism and Visibility | 0 | 0 | 0 |
| Direct Foreign Investment | 3 | 3 | 3 |
| Exchange Gains and Losses | 2 | 0 | 2 |
| Hedging | 2 | 0 | 0 |
| Exchange Rates | 2 | 2 | 2 |
| Offshore Sourcing | 2 | 1 | 2 |
| Political Risks | 0 | 0 | 0 |
| Value-Added Taxes | 2 | 0 | 0 |
| Income Taxes | 1 | 2 | 1 |
| Patent/License Agreements | 0 | 0 | 0 |
| Totals | 31 | 18 | 21 |

APPENDIX A

COMPUTER AND HIGH TECHNOLOGY GRANTS

COMPUTER AND HIGH TECHNOLOGY GRANTS

1. Aldus Corporation

411 First Avenue South, Suite 200
Seattle, WA 98104
Contact : Corporate Contributions Dept.

2. Apple Computer, Inc.

20525 Mariani Avenue MS : 38J
Cupertino, CA 95014
Contact : Community Affairs Dept.

3. Gifts In Kind

700 N. Fairfax Street, Suite 300
Alexandria, VA 22314
Tel : (703) 836-2121
FAX : (703) 549-1481

4. IBM Corporation

2000 Purchase Street
Purchase, NY 10577

5. National Association for the Exchange of Industrial Resources

P. O. Box 8076
Galesburg, IL 61402

6. Tandy Corporation

1800 One Tandy Center
P. O. Box 17180
Fort Worth, TX 76102

7. United Way

Consult Local Tel. Directory for United Way
Regional Office

APPENDIX B

FOUNDATIONS WHICH EMPHASIZE EDUCATION

FOUNDATIONS WHICH EMPHASIZE EDUCATION

1. Anderson Foundation

Tel : (612) 439-5150

EIN : 416-020-920

2. Anderson (Hugh J.) Foundation

Tel : (612) 439-1557

EIN : 416-020-914

3. Baker (George F.) Trust

Tel : (212) 755-1890

EIN : 136-056-818

4. Baker (R. C.) Foundation

Tel : (714) 750-8987

EIN : 951-742-283

5. Balfour (L. G.) Foundation

Tel : (617) 573-6415

EIN : 046-397-138

6. Bay Foundation

Tel : (212) 509-7337

EIN : 135-646-283

7. Bingham (William) Foundation

Tel : (216) 781-3275

EIN : 346-513-791

8. Blum-Kovler Foundation

Tel : (312) 664-5050

EIN : 362-476-143

9. Coleman Foundation

Tel : (312) 243-2700

FAX : (312) 243-5504

EIN : 363-025-967

10. Commonwealth Fund

Tel : (212) 535-0400

EIN : 131-635-260

11. Crown (Arie and Ida) Memorial

Tel : (312) 236-6300
FAX : (312) 899-5039
EIN : 366-076-088

12. Davis (Edwin W. and Catherine M.) Foundation

Tel : (612) 228-0935
EIN : 416-012-064

13. Davis (Shelby Cullom) Foundation

Tel : (212) 425-3212
EIN : 136-165-382

14. Delany (Beatrice P.) Charitable Trust

Tel : (212) 730-3093
EIN : 136-748-171

15. Dow (Herbert H. and Grace A.) Foundation

Tel : (517) 631-3699
FAX : (517) 631- 0675
EIN : 381-437-485

16. Educational Foundation of Americ

Tel : (818) 999-0921
EIN : 136-147-947

17. El Pomar Foundation

Tel : (719) 633-7733
FAX : (719) 577-5702
EIN : 846-003-273

18. Ford Foundation

Tel : (212) 573 - 5000
FAX : (212) 599 - 4584
EIN : 131-684-331

19. Ford (Henry) II Fund

Tel : (313) 259-7777
EIN : 386-066-332

20 Ford (Walter and Josephine) Fund

Tel : (313) 259-7777
EIN : 386-066-334

- 21. Frost Foundation**
Tel : (303) 388-1687
EIN : 720-520-342
- 22. Frueauff (Charles A.) Foundation**
Tel : (904) 561-3508
EIN : 135-605-371
- 23. Fry (Lloyd A.) Foundation**
Tel : (312) 580-0310
EIN : 366-108-775
- 24. Gerstacker (Rollin M.) Foundation**
Tel : (517) 631-6097
EIN : 386-060-276
- 25. Getty (Ann and Gordon) Foundation**
Tel : (415) 788-5853
EIN : 954-078-340
- 26. Hearst Foundation**
Tel : (212) 586-5404
EIN : 136-161-746
- 27. Hearst (William Randolph) Foundation**
Tel : (212) 586-5404
EIN : 136-019-226
- 28. Herrick Foundation**
Tel : (313) 963-6420
EIN : 386-041-517
- 29. Hess Foundation**
Tel : (212) 536-8421
EIN : 221-713-046
- 30. Hewlett (William and Flora) Foundation**
Tel : (415) 329-1070
EIN : 941-655-673
- 31. Kellogg (W.K.) Foundation**
Tel : (616) 968-1611
FAX : (616) 968-0413
EIN : 381-359-264

32. Mars Foundation
Tel : (703) 821-4900
EIN : 546-037-592

33. Olin (John M.)Foundation
Tel : (212) 661-2670
EIN : 376-031-033

34. Stranahan Foundation
Tel : (419) 882-6575
EIN : 346-514-375

35. Cherney (Edward) Charitable Living Trust
Tel : (313) 855-1664

36. Chrysler Corporation Fund
Tel : (313) 956-5194

37. Cline Foundation, The
Tel : (313) 548-1140

38. Demino's Foundation
Tel : (313) 930-1855

39. Dow (Alden and Vada) Fund
Tel : (517) 835-676

40. Dow (Herbert H. and Grace A., The) Foundation
Tel : (517) 631-3699

41. Dow Chemical Company Foundation, The
Tel : (517) 636-1162

42. Dow Corning Foundation
Tel : (517) 496-6290

43. Flint (Mary G. and Robert H.) Foundation
Tel : (313) 538-6800

44. Ford (John B. and Peggy) Fund
Tel : (313) 884-5856

45. Ford Foundation
Tel : (212) 573-5000

46. Ford Motor Company Fund
Tel : (313) 845-8711

47. Frey Foundation, The
Tel : (616) 451-0303

48. Fruehauf Foundation, The
Tel : (313) 774-5130

49. Fruman (Albert and Dorothy) Foundation
Tel : (305) 358-9393

50. Gabooney Foundation
Tel : (313) 961-0200

51. General Motors Foundation

52. Shenson (Charles H.) Trust
Tel : (313) 256-7800

53. Gerstacker (Rollin M., The Foundation
Tel : (517) 631-6097

54. Green (Albert M. and Lyda) Foundation
Tel : (313) 225-1249

55. Herrick Foundation
Tel : (313) 963-6420

56. Kellogg Foundation
Tel : (616) 968-1611

57. Kowalski Sausage Charitable Trust
Tel : (313) 225-3124

58. Kresge Foundation, The
Tel : (313) 643-9630

59. **Manoogian (Richard and Jane) Foundation**
Tel : (313) 274-8799
60. **Maranatha Foundation, Inc.**
Tel : (313) 582-4700
61. **Masco Corporation Charitable Trust**
Tel : (313) 274-7400
62. **Mcgregor Fund**
Tel : (313) 963-3495
63. **Michcon Foundation**
Tel : (313) 256-5472
64. **Skillman Foundation, The**
Tel : (313) 961-8850
65. **Slaughter (William E. Jr.) Foundation, Inc.**
Tel : (313) 666-9300
66. **Slavik (Joseph and Edna, The) Foundation Charitable Trust**
Tel : (617) 497-4251
67. **Slavik (Stephen F. and Mary E.) Foundation Charitable Trust**
Tel : (313) 855-5500
68. **Sparks (Jack D. and Fredda S.) Foundation, Inc**
Tel : (616) 983-1784
69. **St. Clair Foundation**
Tel : (313) 329-2244
70. **St. Denys Foundation**
Tel : (616) 684-3248
71. **Stonisch Foundation**
Tel : (313) 822-9778
72. **Stroh Foundation**
Tel : (313) 446-2000

73. **Stubnitz (Maurice and Dorothy) Foundation**
Tel : (517) 263-5788

74. **Stulberg (David and Lois) Foundation**
Tel : (313) 334-5353

75. **Summerfield (Miriam W.) Foundation**
Tel : (313) 766-8457

76. **Swanson Foundation**
Tel : (313) 923-1122

77. **Taubman Foundation, The**
Tel : (313) 258-6800

78. **Thomas Foundation, The**
Tel : (313) 855-3955

79. **Upjohn Company Foundation, The**
Tel : (616) 323-7017

80. **Vlasic Foundation**
Tel : (313) 642-3380

81. **Vos (Dan, The) Foundation**
Tel : (616) 676-9169

82. **Watling Foundation, Inc.**
Tel : (616) 869-5011

83. **Weisberg (Harvey and Lucille) Family Foundation**
Tel : (313) 855-5516

84. **Wenger (Henry E. and Consuelo S.) Foundation, Inc.**
Tel : (313) 567-1212

85. **Wetsman Foundation, The**
Tel : (313) 642-5100

86. **Williams (Jamison, The) Foundation**
Tel : (313) 642-0333

87. Wilson (Lula C.) Trust
Tel : (313) 645-7306

88. Wilson (Matilda R.) Fund
Tel : (313) 259-7777

89. Wilson (Ralph C., The) Foundation
Tel : (313) 259-9100

90. Winkelman (Isadore and Beryl) Foundation
Tel : (313) 851-5225

91. Wolverine Charitable Foundation
Tel : (616) 866-5521

92. Young Woman's Home Association of Detroit, Michigan
Tel : (313) 886-6970

93. Zurschmiede (W. Tom Jr.) Foundation

94. Cadillac Products, Inc. Foundation
Tel : (313) 583-1525

95. Allied Signal Inc.
Tel : (313) 827-6041

96. Ameritech Publishing
Tel : (313) 524-7300

97. Barton-Malow Company Foundation
Tel : (313) 351-4500

98. Comerica Incorporated
Tel : (313) 222-6987

99. Consumers Powers Company
Tel : (517) 788-0318

100. Cross and Trecker Foundation
Tel : (313) 644-4343

101. Detroit Edison
Tel : (313) 237-9271

102. **Diamond Crystal Foundation, The**
Tel : (313) 329-2244
103. **Domino's Foundation**
Tel : (313) 930-1855
104. **Federal-Mogul Corporation**
Tel : (313) 354-9934
105. **Federal-Mogul Corporation Charitable Trust**
Tel : (313) 225-1243
106. **Ford Motor Company Fund**
Tel : (313) 845-8711
107. **GFV Communications Operation Outreach Foundation**
Tel : (313) 591-3000
108. **K Mart Corporation**
Tel : (313) 643-5009
109. **Masco Corporation**
Tel : (313) 274-7400
110. **Masco Corporation Charitable Trust**
Tel : (313) 274-7400
111. **Michcon Foundation**
Tel : (313) 256-5472
112. **Michigan Bell Telephone Company**
Tel : (313) 223-7282
113. **Michigan Consolidated Gas Company**
Tel : (313) 256-5077
114. **Monroe Auto Equipment Company Foundation Trust**
Tel : (313) 222-3386

115. National Bank of Detroit Charitable Trust
Tel : (313) 225-3124

116. Stroh Foundation, The
Tel : (313) 446-2000

117. Upjohn Company Foundation, The
Tel : (616) 323-7017

118. Kresge Foundation
Tel : (313) 643-9630
FAX : (313) 643-0588
EIN : 381-33-217

119. Lambe (Claude R.) Charitable Foundation
Tel : (316) 832-5227
EIN : 480-935-563

120. Levee (Polly Annenburg) Charitable Trust
Tel : (215) 341-9270
EIN : 236-286-761

121. Luce (Henry) Foundation
Tel : (212) 489-7700
EIN : 136-001-282

122. Manoogian (Alex and Marie) Foundation
Tel : (313) 274-7400
EIN : 386-089-952

123. McGregor Fund
FAX : (313) 963-3512
EIN : 380-808-800

124. Mellon (Andrew W.) Foundation
Tel : (212) 838-8400
FAX : (212) 223-2778
EIN : 131-879-954

125. Merillat (Orville D. and Ruth A.) Foundation

Tel : (517) 263-0771
FAX : (517) 265-3325
EIN : 382-476-813

126. Monell (Ambrose) Foundation

Tel : (212) 586-0700
EIN : 131-982-683

127. New-Land Foundation

Tel : (212) 841-6000
EIN : 136-086-562

128. New World Foundation

Tel : (212) 249-1023
EIN : 131-919-791

129. Olin (F.W) Foundation

Tel : (212) 832-0508
EIN : 131-820-176

130. Sage Foundation

EIN : 386-041-518

131. Skillman Foundation

Tel : (313) 961-8850
EIN : 381-675-780

132. Sloan (Alfred P.) Foundation

Tel : (212) 757-5117
EIN : 131-632-877

133. Teagle Foundation

Tel : (212) 247-1946
EIN : 131-773-645

134. Towsley (Harry A. and Margaret D.) Foundation

Tel : (313) 662-6777
EIN : 386-091-798

135. Upton (Frederick S.) Foundation

Tel : (616) 982-0272
EIN : 366-013-317

136. Watson (Thomas J.) Foundation

Tel : (401) 274-1952

EIN : 136-038-151

137. Wean (Raymond John) Foundation

Tel : (216) 394-5600

EIN : 346-505-038

138. Wilson (Matilda R.) Fund

Tel : (313) 259-7777

EIN : 386-087-665

139. PJM Charitable Foundation

Tel : (212) 456-7906

EIN : 133-406-169

140. Dillard (Anna-Karin J. and David B.) Foundation

Tel : (212) 489-6600

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